

MEMORANDUM

To: Bill Maxwell, U.S. Environmental Protection Agency,
OAQPS (MD-13)

FROM: Mary Lalley, ERG/RTP

DATE: January 30, 1997

SUBJECT: Final Summary of January 7, 1997 Meeting of the ICCR
Process Heater Work Group

1.0 PURPOSE

The purpose of the meeting was to allow meeting attendees to discuss various activities of the ICCR Process Heater Work Group. Topics of discussion included information collection efforts, the definition of process heater, industries represented on the work group, stakeholder co-chairs and future meetings.

2.0 LOCATION AND DATE

The meeting was held on January 7, 1996 at the Chemical Manufacturers Association's headquarters in Arlington, VA.

3.0 MEETING ATTENDEES

Meeting attendees include representatives of the OAQPS Emission Standards Division, trade associations, and state agencies. A complete list of attendees (with their affiliation) is included as attachment 1.

4.0 SUMMARY OF DISCUSSION

4.1 Voluntary Information Collection Efforts

4.1.1 American Petroleum Institute

A representative of the American Petroleum Institute (API) provided that the API survey is currently being reviewed

internally and is scheduled to be ready for distribution by the end of January. The API representative added that they are reluctant to continue information collection efforts since learning that the EPA is developing a database of combustion sources. The API representative expressed the concerns that their survey may request information that is already available in the EPA database and that it may create an unnecessary burden for respondents. An EPA representative stated that enough data are missing from the database that collection efforts will not be duplicative and that the data were not obtained through recent requests. The API representative stated that responding to information requests requires more than a minimal effort by respondents even if the information has been provided previously. The API representative stated that API intends to review the existing ICCR database before distributing surveys. An EPA representative expressed the concern that voluntary collection efforts will be continually delayed and suggested that API not wait for the second version of the database before sending out surveys. The API representative agreed with this suggestion. The EPA representative provided that it may be possible to print reports from the database in the survey format with the data that are in the database filled in. The API representative agreed to try this approach.

Another API representative added that, although they are planning on sending out a single survey, they support a two-tiered approach.

In response to an EPA representative's question, an API representative stated that submitting data electronically to EPA by the end of July is a reasonable goal.

4.1.2 Pulp and Paper Industry

A representative of the pulp and paper industry provided that a database of combustion units and emission factors has been developed by the National Council for Air and Stream Improvement (NCASI) for the forest products industry. The pulp and paper industry representative added that results of an industry survey of process heaters subject to developing MACT standards has been provided to EPA. The representative also stated that the pulp and paper industry is embarking on a two year-long HAP testing program for a number of sources and the results will be given to EPA. The representative later stated that representatives of the pulp and paper industry involved in various ICCR work groups will develop a plan for additional information collection required and that narrowing the definition of ICCR process heaters will assist in conducting information gathering.

4.1.3 Chemical Manufacturers Association

A representative of the Chemical Manufacturers Association (CMA) stated that CMA has developed a three-phased approach for data collection which includes a preliminary survey and a more targeted, detailed survey. The preliminary approach is currently being reviewed by CMA. The preliminary approach, schedule and phase I survey are included as attachment 2.

4.1.4 National Petroleum Refiners Association

A representative of the National Petroleum Refiners Association (NPRA) provided that NPRA will be using the survey developed by API to survey NPRA members.

4.1.5 Aluminum Manufacturers

A representative of aluminum manufacturers stated that he will request information for indirect-fired process heaters at aluminum manufacturing facilities.

4.1.6 Mandatory Data Collection

An industry representative asked if, considering the voluntary collection efforts, EPA will be performing information collection for the ICCR. The industry representative estimated that 98 percent of refineries would be covered through the efforts of API and NPRA. An EPA representative responded that EPA will not likely send questionnaires to facilities that participated in voluntary surveys. Another EPA representative pointed out that companies other than those represented on the work group own and operate process heaters.

Several industry representatives expressed concern over the quality of data that would be obtained through a mandatory questionnaire. An industry representative suggested that the mandatory information collection effort could be made more effective by preceding the detailed questionnaire with an abbreviated questionnaire designed to identify facilities with ICCR combustion devices. One industry representative stated that one survey can not be used for all industries because each industry has it's own "language".

4.1.7 Coordination of Voluntary Data Collection Efforts

An EPA representative stated that EPA will accommodate voluntary data collection efforts that provide data of the same quality and in the same time frame as an EPA-sponsored collection and that allow for periodic checkpoints for EPA review. In response to an industry representative's question regarding

voluntary survey responses that are not completely filled in, an EPA representative stated that these responses will not likely be rejected and explained that missing data may be obtained through follow-up with the facility or interpolation.

An EPA representative suggested that trade associations seek EPA approval for voluntary information collection plans, either directly or through the work group, and request a guarantee from EPA that the data gathered will be accepted by EPA. Several meeting attendees expressed support for approving the information collection plans as a group before presenting them to EPA. Several industry representatives stated that it is necessary to establish consistency between the trade association surveys. An industry representative suggested the formation of a subgroup to review the existing trade association surveys to determine if they are consistent with each other and with EPA's criteria. An EPA representative expressed the concern that review of the information collection plans by a subgroup will negatively impact the information collection schedules.

An industry representative suggested expressing support to the Coordinating Committee for the coordination of information collection efforts between work groups. An EPA representative clarified that the work group is supporting the coordination effort to ensure that facilities do not receive multiple surveys and that any survey used to gather information for several equipment types is acceptable to all associated work groups.

4.1.8 Recommendations to be Made to the Coordinating Committee Regarding Information Collection

The group agreed to recommend to the Coordinating Committee that they recommend that EPA not survey process heaters that will be surveyed through voluntary information collection efforts.

The work group also agreed to express support for coordination of information collection efforts between the ICCR work groups.

4.1.9 Information Collection Action Items

The Information Collection subgroup, chaired by John Ogle, will review the voluntary information collection plans to ensure that they meet EPA's criteria for the type of data collected, data quality, schedule of collection, and sampling methodology and that they allow for periodic EPA review. Subgroup members include Lawrence Otwell, Roy Carwile, Bob Morris and Susan Blevins.

4.2 ICCR Database

4.2.1 Amount and Types of Data Available

In response to an API representative's comment that data collected through voluntary efforts may duplicate information already in the ICCR database, an EPA representative explained that while the database contains a large number of combustion sources, approximately 80,000, the amount of data available for each combustion source is limited. Another EPA representative stated that, because the database is made up of data supplied by States to the AIRS and OTAG databases and many States do not include units below a certain size cutoff, the database does not represent small units well. An EPA representative added that information obtained from the OTAG database has been through a quality assurance check, while the level of quality assurance performed on AIRS data is dependent on the submitting State.

In response to questions regarding the types of data included in the database, EPA representatives explained that facilities will be identified by Standard Industrial

Classification (SIC) code and address and that equipment will be identified by Source Classification Code (SCC). An EPA representative provided that the database software being used will allow for searches on any field in the database and that it is possible to determine the original source of each entry.

An EPA representative stated that the database will contain inventory and emission test data and that currently, efforts are focused on entering emission test data for hazardous air pollutants. Another EPA representative explained that the source of emission test data is the STIRS database which contains over 400 test reports from approximately 15 States. An industry representative asked a question regarding whether the database will include test methods used and levels of detection. Such information will be included in the database and additional details can be obtained from the original test reports. An EPA representative stated that it will be up to the work group to determine which data are acceptable.

In response to an industry representative's question, an EPA representative explained that equipment in the ICCR database are identified as process heaters based on the SCC assigned and that it may be necessary to review the SCCs assigned to ensure that the equipment identified as process heaters meet the definition used for the ICCR.

4.2.2 ICCR Database and Voluntary Information Collection

One industry representative expressed the concern that it may be difficult to combine data collected voluntarily into the database. An EPA representative stated that the ICCR database is based on the ICCR Information Collection Request (ICR) questionnaire and the API questionnaire is very similar to the ICR questionnaire.

4.2.3 Availability of Database

The EPA representative stated that the structure of the database is currently available and the first version of the populated database is due to be made available by the end of January. The first version will include AIRS and OTAG data and possibly data from a few State databases. The second version of the database will include data obtained from approximately 23 individual State databases and an incinerator database and is expected to be completed by the end of March. The EPA representative explained that the database will be continually updated throughout the ICCR process, potentially with data from voluntary surveys.

4.3 ICCR Process Heater Definition

4.3.1 ICCR Process Heater Definition and Information Collection

Several meeting attendees suggested limiting the types of process heaters that will be covered by the ICCR before surveys are sent out. An EPA representative agreed that it is desirable to focus information collection efforts on heaters that will be regulated. The EPA representative cautioned the group that EPA will be reluctant to state that certain types of process heaters will not be subject to the ICCR unless they are being covered by another standard. The EPA representative suggested that the group recommend deferring action on certain types of process heaters while focusing on others. The EPA representative added that this is the approach agreed to by an environmental group representative at a previous meeting.

Meeting attendees discussed the description of process heaters that will definitely be covered by the ICCR that was agreed to at the November 7, 1996 Process Heater Work Group meeting and referred to the meeting minutes for the description.

An excerpt from the November 7 meeting minutes that include that description is included as attachment 3. The opinions of meeting attendees differed regarding whether this description was to be used to limit process heaters for which information will be collected. Several meeting attendees stated that it was their understanding that process heaters in addition to those matching the description would be considered for inclusion in the ICCR process heater definition. Some meeting attendees expressed that they understood that information will not be collected for process heaters that do not match the description but that these heaters will be reviewed to determine if they will be covered by another rulemaking.

An industry representative asked if EPA will use the same definition of process heater developed by the work group for any EPA-sponsored information collection. An EPA representative suggested that, if the group agrees that EPA should use the same definition, a recommendation to that effect should be made to the Coordinating Committee.

An industry representative suggested that the definition created at the November 7, 1996 Process Heater Work Group meeting be used by both the EPA and the work group to limit information collection efforts. A representative of State agencies asked if the group was still considering section 111, 112, and 129 regulations as within the scope of the ICCR. An EPA representative explained it is not likely that the group will be able to address all of the regulations that could be covered by the ICCR and that it may be necessary to collect additional information before the group can determine the types of regulations on which to focus.

4.3.2 Indirect-Fired and Direct-Fired Heaters

An industry representative stated that in developing a standard for direct-fired heaters the focus would be the process being heated and it would be necessary to identify specific information about a wide variety of processes. The industry representative gave the example of a natural gas-fired oven used to dry finish applied to wood products. Emissions from the oven are related more to the finish than the natural gas. The industry representative continued that if the scope is limited to indirect-fired heaters, the focus would be the fuel fired and the variability of heaters involved would be greatly reduced.

An industry representative clarified that direct-fired heaters have two sources of emissions, the fuel fired and the process heated, and that the emissions are combined. Another industry representative clarified that indirect-fired heaters create emissions associated with the fuel fired but do not create process-related emissions.

An industry representative expressed the concern that the current work group does not adequately represent heater owners and operators if direct-fired heaters are to be covered by the ICCR.

4.3.3 "Other" Process Heaters

Meeting attendees recalled the approach proposed for process heaters that do not match the description created at the November 7 Process Heater Work Group meeting which included determining whether or not a heater was or will be covered by another MACT standard and making EPA aware of any process heaters that are not and will not be covered. An EPA representative stated that an environmental group representative agreed to this approach at a previous meeting.

Meeting attendees discussed the format of the output the group will produce to document their analysis of "other" process heaters. Industry representatives suggested that each trade association review a list of heaters categorized by SCC for their industry and indicate those that match the proposed definition, and for those that do not, indicate the result of analyzing the heater using a decision flow diagram such as that discussed at the November 7 meeting. This diagram includes a question on whether the heater is being or could be covered by a MACT standard for the process industry instead of under the ICCR. One industry representative suggested that it is not necessary to perform detailed analyses on these process heaters.

An industry representative stated that if it is determined that it is appropriate for a heater to be covered by the ICCR, it can be added to the ICCR scope. Another industry representative asked how process heaters that meet the proposed description but are already covered by a MACT standard will be addressed. An industry representative suggested that such heaters will be identified and addressed later in the regulatory development process.

4.3.4 Recommendations to be Made to the Coordinating Committee Regarding the ICCR Process Heater Definition

The group agreed to make the following recommendations to the Coordinating Committee regarding the ICCR process heater definition:

1. Recommend to EPA that the group proceed with information collection efforts for process heaters which match the definition agreed upon at the November 7 Process Heater Work Group meeting.
2. Recommend to EPA that any EPA-sponsored information collection for process heaters focus on process heaters

which match the definition agreed upon by the work group at the November 7 meeting.

3. The Process Heater Work Group will review a comprehensive list of process heaters that do not match the proposed ICCR process heater definition and document the reasons for not focusing on these heaters.

4.3.5 Action Items Regarding the ICCR Process Heater Definition

Trade associations will review the list of process heaters and determine which meet the ICCR process heater definition and document the results of analyzing heaters that do not meet the definition using the decision flow diagram (to be updated by Lee Gilmer).

The list of ICCR equipment with SCCs and descriptions, which includes process heaters, will be posted on the TTN.

4.4 De Minimis Level

4.4.1 De Minimis Level Discussion

An industry representative provided that other work groups have discussed setting a de minimis level, based on emissions or size, for equipment to be addressed by the ICCR and suggested the group discuss this option. One industry representative suggested a de minimis level of 10 MMBtu/hr, which is the size cut-off established for 40 CFR subpart Dc (an NSPS). Another industry representative suggested a de minimis of 5 MMBtu/hr. An EPA representative explained the rationale for the subpart Dc cut-off and stated that the cut-off is not necessarily applicable to ICCR process heaters.

An EPA representative stated that if a de minimis level is proposed, the group must provide a basis for it. An industry representative provided that data compiled by the Department of Energy on industrial fuel consumption could be used in conjunction with emission factors to show where efforts should be

focused. Another industry representative stated that this information can be used if indirect-fired process heaters are determined to be the focus of the ICCR. One industry representative suggested it may be possible to use information in journals to determine the distribution of process heaters by size. Meeting attendees agreed to form a subgroup to develop a supportable de minimis level.

4.4.2 Action Item Regarding De Minimis Level

The "de minimis" subgroup, chaired by Jim Seebold, will develop a rationale for a lower level cut-off for process heaters to be included in surveys. Subgroup members include Norbert Dee, John Bloomer, Chuck Feerick, Karluss Thomas and Bill Maxwell.

4.5 Industry Representation on Work Group

4.5.1 Concerns Regarding Representation

An industry representative suggested soliciting participation of industries that are not currently represented on the work group. Several meeting attendees stated that the ICCR has been well-publicized and industries were given many opportunities to participate or be represented by a participating trade organization. An industry representative stated that the industries that are not represented include food and agricultural, secondary metals processing, non-metallic minerals processing and pharmaceuticals. Another industry representative stated that he has been informing members of the precious metals processing industry of ICCR developments. An EPA representative stated that the Aluminum Company of America (ALCOA) and the pharmaceutical industry are represented on other work groups. A CMA representative added that one pharmaceutical company is represented by CMA. The EPA representative suggested that the

Boiler Work Group may need to be made aware of the food and agriculture industry. An industry representative stated that feed dryers are an example of process heaters used by the food and agriculture industry.

Several meeting attendees suggested that mandatory questionnaires should be sent to members of industries that are not represented.

One industry representative expressed a concern that the data obtained through mandatory questionnaires may be of poor quality and suggested that it may be in the group's interest to involve additional industries in voluntary collection efforts. Another industry representative stated that the Testing and Monitoring Protocol Work Group will be able to provide assistance with poor data. An industry representative suggested that it would be difficult for a trade association to meet EPA's time line for data collection if they are not already involved in the ICCR. One industry representative asked if it is EPA's or the work group's responsibility to involve all affected industries. An EPA representative replied that, while EPA has overall responsibility, the work group may solicit the participation of other industries.

An EPA representative urged meeting attendees who are interested in becoming work group members to submit nomination forms.

4.5.2 Action Items Regarding Representation

Lawrence Otwell will contact representatives of industry groups that are not currently participating in the ICCR and Roy Carwile will contact representatives of the National Mining Congress so that they can be involved in voluntary information collection efforts.

4.6 Stakeholder Co-chairs

An EPA representative stated that the Coordinating Committee is finalizing guidance regarding the responsibilities of the stakeholder co-chair and described these responsibilities. An industry representative added that stakeholder co-chair terms are to last for at least one year.

John Ogle was selected as the stakeholder co-chair. He will report to the Coordinating Committee for the work group. Lee Gilmer was selected as the stakeholder co-chair alternate. He will co-chair Process Heater Work Group meetings and have the authority to raise unresolved issues to the Coordinating Committee.

4.7 Next Meetings

The following meetings are scheduled to take place:

- February 11 in Houston. The meeting will begin at 10:00 am and will be coordinated by Lee Gilmer.
- March 18 in Chicago at the Intercontinental Hotel. The meeting will be coordinated by Chuck Feerick.
- April 22 in Research Triangle Park. The meeting will be coordinated by Bill Maxwell.

These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the January 7, 1997, meeting of the Process Heater Work Group. Bill Maxwell, EPA.

Attachment 1
MEETING ATTENDEES

Susan Blevins, Office of Air Quality, Texas Natural Resource
Conservation Commission (TNRCC)
John Bloomer, Selas Corporation of America
Roy Carwile, Aluminum Company of America
Michael Clowers, Amerada Hess Corporation
Norbert Dee, National Petroleum Refiners Association
Chuck Feerick, Exxon Company, USA
Bruno Ferraro, Grove Scientific Company
Klane Forsgren, Sinclair Oil
Lee Gilmer, Texaco, Inc.
Greg Johnson, Shell Oil Company
Mary Lalley, Eastern Research Group
Arthur Lee, Texaco, Inc.
Bill Maxwell, EPA, Office of Air Quality Planning and Standards
Robert Morris, The Coastal Corporation
John Ogle, Dow Chemical Company
Lawrence Otwell, Georgia-Pacific Corporation
Fred Porter, EPA, Office of Air Quality Planning and Standards
Jim Seebold, Chevron Research and Technology Company
Karluss Thomas, Chemical Manufacturers Association

Attachment 2

CMA's Draft Sampling Plan, Schedule and Phase I Questionnaire

CMA ICCR Information Collection Survey Draft Sampling Plan

Phase I

1. Determine CMA combustion sources in SIC 28 and relative portion of SIC 28 sources.
 - Potentially start with EPA database
2. Name, address, source control status, firing fuel, test data, capacity, attainment, non-attainment, etc.
 - N. Morrow will draft form by 1/6

Phase II

1. Use unified form.
2. Select who form goes to, and for what type of equipment

Selection Criteria

- Statistically Valid Sample
- Attainment / Non-Attainment
- Facility Size
- Geographical (e.g., EPA regions)
- Number of Combustion Units / Number of Employees
- Fuel Type (e.g., solid, liquid, gas)

Phase III

1. Solicit Bids
2. Contractor Selection
3. Distribution of Survey
4. Survey Workshop for CMA Membership
5. Compile Aggregated Results
6. Submit to EPA with Key to Data Sources
7. Data Analysis and Future Advocacy

CMA ICCR Information Collection Survey Draft Schedule

<i>Activity</i>	<i>Tentative Timing</i>
-----------------	-------------------------

Phase I

Prepare Initial Survey Form	1/06/97
Finalize Preliminary Survey Form	1/13/97
Distribute Initial Survey	1/30/97
Return Initial Survey	2/28/97
Compiles Initial Survey	3/15/97

Phase II

Solicits Bids (if needed)	2/15/97
Select Contractor	2/28/97
Select Recipients	3/30/97
→Using EPA database and CMA initial survey	

Phase III

Distribute Survey	3/30/97
Workshop	4/15/97
Survey Return	5/30/97
Compile	6/30/97
Submit to EPA	7/30/97

**ICCR Rulemaking
CMA Combustor Survey - Phase I
Instructions**

General:

This survey covers all stationary combustion devices at company facilities, except those which exclusively provide steam for building heat or which are used for cooking or other kitchen services. All other stationary combustion devices should be included in this survey, including emergency power generators for buildings, pollution control devices (e.g. flares, fume incinerators) and combustion devices associated with laboratory, pilot plant and other adjunct operations at the facility.

For the purposes of this survey each combustion device will be treated as a unit, including any auxiliary firing used for supplemental waste heat recovery or pollution control. For example, a gas turbine with an auxiliary duct burner is considered one device for this survey.

If you consider any of this information to be confidential, mark the item "confidential" and do not include the specific information in your response. CMA or other third party will follow-up and code the response anonymously if the data is needed.

Fill out electronically, if possible.

Page 1:

Fill out this sheet for each company facility that has combustion devices as detailed above.

Page 2:

Fill out one sheet for each combustion device or group of identical combustion devices at each facility. Identical, for the purposes of this survey, means all of the questions on page two have the same answer, without using a range to answer any of the questions.

Use added pages or continue on the back side of page 2, if necessary to complete any of the questions.

Question 1C - If possible, provide a four digit SIC code for the process with which the combustion device is associated. For shared equipment, use the predominant SIC code for the processes that the combustion device supports.

Question 6 - Provide the design firing rate for the primary combustion part of the device (e.g. gas, turbine, process heater), including all materials fired. Provide in BTU/hr, if possible. This rate should be based on the annual design maximum and not represent the maximum achievable by overfiring for short times, such as a few hours. If the device has auxiliary firing for waste heat recovery or pollution control (afterburning) or other auxiliary functions, provide that rate separately. If the device combusts wastes in addition to other fuels include the heat provided by the waste in the primary or auxiliary value as appropriate.

Question 7 - Indicate if combustion device is equipped with pollution control techniques. This includes add-on control equipment, as well as combustion modification techniques, such as low No_x burners, water/steam injection.

Question 8 - Indicate if stack test data is available. For criteria pollutants such test data should be by EPA approved methods. For HAPs or other pollutants, indicate the availability of test data by any method.

Question 9 - Identify all materials combusted in the device. For each indicate whether it is a gas, liquid or solid as fed to the device. Also, indicate if the material is a waste. For purposes of this survey, a waste is any material that would be a solid waste under RCRA or which you consider to be a waste.

Please distinguish fossil fuels from mixed plant fuel streams (e.g. natural gas from plant gas mixtures). Please use generic names, not facility specific names (e.g. "process offgas" not "T-1 overhead gas", "liquid byproduct" not "light ends from XYZ process").

Specify as the primary fuel the material that over a year provides the majority of the heat input. Specify as secondary fuels any other material combusted in the device (e.g. wastes, process offgas, process byproduct liquids). If the device has alternate primary fuels (e.g. natural gas or fuel oil) indicate that on the primary fuel line. Do not indicate as alternates fuels which are fired simultaneously.

Continue the table as necessary to include all materials combusted.

**ICCR Rulemaking
CMA Combustor Survey - Phase I**

Page 1 - Fill out one for each company facility (i.e. site)

1. General Facility Information

Company Name: _____

Facility Name: _____

Street Address: _____

Mailing Address (if
different) _____

Contact Name: _____

Contact Phone: _____

Contact Fax: _____

2. Number of Employees at Facility: _____

3. Facility is in Non-Attainment Area for: (Circle all that apply)

Ozone

PM10

CO

SO_x

NO₂

Page 2 - Fill out this page for each combustion device or group of identical devices.

1. Facility Name: _____
2. Number of identical devices:
(1 unit assumed if blank) _____
3. SIC Code applicable to device:
(2869 assumed, if blank) _____

4. Combustion Device type: (Circle one)

Boiler Process Heater Incinerator Gas Turbine Engine Flare

Is device a pollution control device? Yes No

Is device an emergency backup? Yes No

5. Primary Purpose of Device: (Circle one)

Produce Steam or Hot Water Provide Process Heat, except by
producing steam or hot water Combust Waste

Drive Electricity Generator Drive Process
Equipment Other (Explain)

6. Combustion Device design firing rate: _____ BTU/hr

Design Firing Rate of Auxiliary (Waste
Heat) System, if any: _____ BTU/hr

7. Is Combustion Device No Yes,
equipped with pollution for what pollutants? _____
controls? _____
(Circle one)

8. Is stack test data available No Yes,
for this device? for what pollutants? _____
(Circle One)

9. List all fuels and materials combusted, indicate if material is gas, liquid or solid and if it is a waste:

Primary: _____

Other: _____

Attachment 3

Excerpt From November 7, 1996 Process Heater Work Group
Meeting Minutes

Process Heater Description

"Process Heater" means an enclosed device using controlled flame and the unit's primary purpose is to transfer heat a) to a process fluid, or b) to a process material that is not a fluid, or c) to a heat transfer material, instead of generating steam, and for use in the process unit.

The group agreed that process heaters which meet the definition provided by the small group and from which pollutants are due solely to the combustion of fuel and/or waste will be covered by the ICCR. A diagram approved by the group to represent process heaters covered by the ICCR is provided in figure 1.

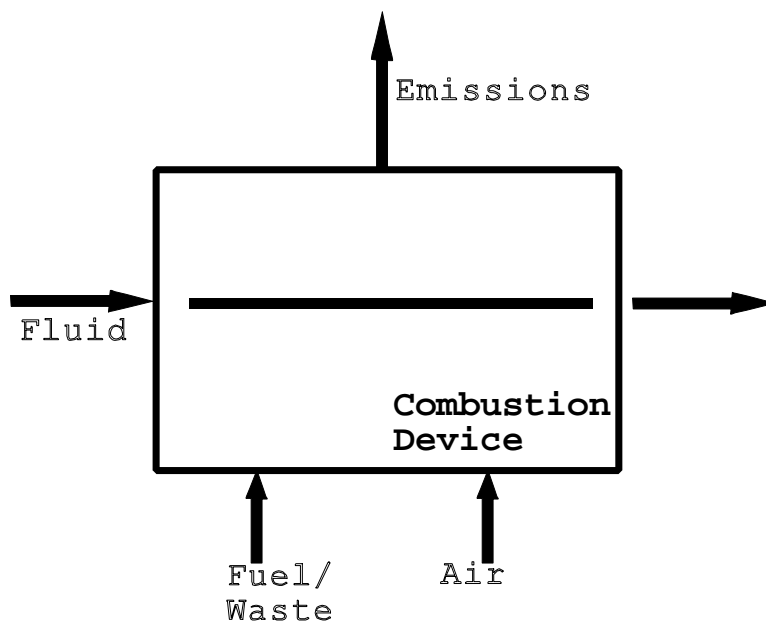


Figure 1. Process Heater Subset Covered by the ICCR